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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,260	12/01/2003	Shigeru Emoto	244681US0	1633
22850	7590	01/27/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			DOTE, JANIS L	
			ART UNIT	PAPER NUMBER
			1756	
DATE MAILED: 01/27/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/724,260

Applicant(s)

EMOTO ET AL.

Examiner

Janis L. Dote

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 15-18 is/are rejected.
- 7) ☒ Claim(s) 11, 13 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/16/05; 12/16/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. This office action is responsive to applicants' response filed on Jan. 6, 2006. The examiner acknowledges the amendment to the specification set forth in the amendment filed on Jan. 6, 2006. Claims 1-18 are pending.

2. The finality of the last office action is withdrawn. On further review of the reference US 2003/0138717 A1 (Yagi), the examiner has determined that Yagi anticipates the toner recited in instant claims 1-10, 12, and 15-18. A rejection of claims 1-10, 12, and 15-18 under 35 U.S.C. 102(e) over Yagi is set forth infra.

3. The examiner has considered the US applications listed on "List of related cases" in the Information Disclosure statements filed on Nov. 16, 2005, and Dec. 16, 2005.

4. The objection to the specification set forth in the office action mailed on Oct. 6, 2005, paragraph 4, has been withdrawn in response to the paragraph added following the paragraph at page 11, line 23, of the specification, set forth in the amendment filed on Jan. 6, 2006.

The rejection of claims 1-10, 12, 15-18 under 35 U.S.C. 103(a) over Yagi, set forth in the office action mailed on

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Oct. 6, 2005, paragraph 6, has been withdrawn because Yagi is not prior art under 35 U.S.C. 103(c). Applicants' representative has shown that Yagi and the instant application were owned by or subject to an obligation of assignment to the same person at the time the invention in the instant application was made. See page 3, lines 11-13, of the response filed on Jan. 6, 2006.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-10, 12, and 15-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Yagi, as evidenced by applicants' admission at page 10, lines 7-18, and page 11, lines 2-6.

Yagi discloses a toner comprising toner particles comprising a binder resin that comprises a modified polyester resin and an unmodified polyester resin - low molecular weight polyester 1, carnauba wax as the releasing agent, and carbon black, and organic fine resin particles 1 adhered to the surface of the toner particles at a coverage ratio of 85%. See paragraphs 0239-0273; toner 17 in example 11 in paragraph 0369 and in Table 1 at page 23. The coverage ratio of 85% is within

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the coverage ratio of 50 to 100% recited in instant claim 1. The toner has a number average particle size ( $D_n$ ) of 5.30  $\mu\text{m}$  and a volume average particle size ( $D_v$ ) of 6.21  $\mu\text{m}$ , and a ratio of  $D_v/D_n$  of 1.17. The toner also has an average circularity of 0.950. See Table 1 at page 23, example 11, toner 17. The  $D_v$ , the ratio  $D_v/D_n$ , and the average circularity are within the ranges recited in instant claims 6, 7, and 12, respectively. The modified polyester resin has a glass transition temperature ( $T_g$ ) of 55°C, which is within the range of 40 to 55°C recited in instant claim 1. See paragraph 0246. Low molecular weight polyester resin 1 has an acid value of 25, which is within the acid value range recited in instant claim 8. See paragraph 0244. The weight ratio of the modified polyester to low molecular weight polyester resin 1 is about 0.6, which is within the ratio range of 5/95 to 40/60 recited in instant claim 1. The weight ratio was determined by the information provided in example 11 of Yagi. Organic fine resin particles 1 have a  $T_g$  of 57°C, and an average particle size of 100 nm. The  $T_g$  and average particle size meet the ranges recited in instant claim 1 and 10, respectively. The fine resin particles comprise a vinyl resin, which meets the compositional limitation recited in instant claim 9. Accordingly, the Yagi toner particles in example 11 meet the toner particles compositional limitations

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recited in instant claims 1, 4, 5, and 8, and the physical limitations recited in instant claims 6, 7, and 12. The Yagi organic fine particles meet the particulate resin limitations recited in instant claims 1, 9, and 10.

Yagi also discloses that the toner can be used in a two-component developer comprising a carrier or as a one-component developer, thereby meeting the developer limitations recited in instant claim 15. Paragraph 0220. Yagi discloses a toner container shown in Fig. 2. Paragraph 0236.

Yagi does not disclose that the toner in example 11 has (1) a ratio of the toner storage modulus at 80°C ( $G'_{80}$ ) to the toner storage modulus at 180°C ( $G'_{180}$ ) of 100 to 1000 as recited in instant claim 1. Nor does Yagi disclose that the toner has the values of  $G'_{80}$  and  $G'_{180}$  recited in instant claims 2 and 3.

The instant specification at page 10, lines 15-18, discloses that a toner having a ratio  $G'_{80}/G'_{180}$  of 100 to 1000 has good low-temperature fixability, releasability, and a small particle diameter. According to the instant specification at page 11, lines 2-6, low temperature fixability cannot be obtained when the ratio is greater than 1000, and it is difficult to form a toner particle having a ratio of less than 100. The instant specification at page 10, lines 7-12, further discloses that when the toner has a  $G'_{80}$  and a  $G'_{180}$  as

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recited in instant claim 3, low-temperature fixability is further improved.

As discussed above, the compositions of the Yagi toner particles and the Yagi organic fine resin particles in example 11 meet the compositional limitations recited in the instant claims. The toner Dv and ratio Dv/Dn meet the ranges recited in instant claims 6 and 7, respectively. As discussed infra, the toner particles in example 11 are obtained by a process that meets the steps recited in instant claim 18. Yagi discloses that toner 17 in example 11 has low temperature fixability and offset resistance, and does not contaminate the image forming members used, such as the fixing device and image bearing member. Paragraph 0032; and Table 3 at page 23, example 11, which reports that toner 17 in example 11 has a "lower fixing temperature" of 150°C and exhibits no occurrence of offset for temperatures below 220°C. Table 3 also reports that no toner filming was observed. These are the properties sought by applicants. Accordingly, because the Yagi toner particles and fine resin particles in example 11 meet the compositional and physical limitations recited in the instant claims and the Yagi toner appears to have the toner properties sought by applicants, it is reasonable to presume that toner 17 in example 11 of Yagi has the storage modulus ratio  $G'_{80}/G'_{180}$

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recited in instant claim 1 and the values of  $G'_{80}$  and  $G'_{180}$  recited in instant claims 2 and 3. The burden is on applicants to prove otherwise. In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Toner 17 in example 11 of Yagi is obtained by:

(1) preparing a master batch comprising the carbon black and a polyester resin; (2) preparing a material solution comprising the carnauba wax and the low molecular weight polyester; (3) forming a pigment-wax dispersion by mixing the master batch of step (1), the material solution, and additional low molecular weight polyester; (4) mixing the pigment-wax dispersion of step (3), a modified polyester resin comprising isocyanate groups, which is capable of reacting with an active hydrogen to form the urea-modified polyester, and a ketimine compound, which has an active hydrogen, in an organic solvent; (5) dispersing the mixture of step (4) in an aqueous medium comprising resin particles, while reacting the ketimine compound with the modified polyester resin to form toner particles; (6) removing the organic solvent from the dispersion of step (5); and (7) washing the toner particles resulting from step (6).

Paragraphs 0252-0273 and 0369. The Yagi process steps meet the process steps recited instant claim 18, but for the recitation "to remove excessive particles of the particulate resin material from a surface thereof." Yagi does not disclose that washing



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the toner particles removes the excessive organic fine resin particles from the surface of the toner particles as recited in instant claim 18. However, the recitation "to remove excessive particles of the particulate resin material from a surface thereof" as recited in instant claim 18 is a statement of intended use, which does not distinguish the process disclosed by Yagi. Furthermore, as discussed above, toner 17 in example 11 of Yagi meets the coverage amount recited in instant claim 1. Thus, the intended use recited in the instant claim does not result in a difference between the process recited in the instant claim and the process disclosed by Yagi.

7. Claims 11, 13, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not disclose or suggest a particulate material having a volume-average molecular weight of 1000 to 100,000 recited in instant claim 11 for the reasons discussed in the office action mailed on Mar. 21, 2005, paragraph 13, which are incorporated herein by reference.

Yagi does not teach or suggest that its toner particles have a spindle shape as recited in instant claims 13 and 14.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The central fax phone number is (571) 273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JLD

Jan. 19, 2006

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